

REMARKS

Upon careful and complete consideration of the Final Office Action dated September 9, 2004, applicants have filed a Request for Continued Examination and have amended the claims which, when considered in conjunction with the comments herein below, are deemed to place the present application into condition for allowance. Favorable reconsideration of this application, as amended, is respectfully solicited.

The Office Action rejected claims 1-15, 17 and 18 under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent 5,723,167 to Lewis et al. (hereinafter referred to as "Lewis et al.") taken in view of U.S. Patent 3,950,560 to Rahman et al. (hereinafter referred to as "Rahman I") and U.S. Patent 4,109,026 to Rahman et al. (hereinafter referred to as "Rahman II"). The Office Action further rejected claim 16 under 35 U.S.C. §103(a), as being unpatentable over the same references as applied to claims 1-15, 17 and 18, and further in view of U.S. Patent No. 4,735,816 to Sterner et al. (hereinafter referred to as "Sterner et al."). Still further, claims 9, 10, 13 and 14 were rejected under 35 U.S.C. §103(a), as being unpatentable over Rahman I; claims 1-8, 11-12, 17 and 18 were rejected under 35 U.S.C. §103(a), as being unpatentable over Rahman I as applied to claims 1-10, 13 and 14 above, and further in view of Rahman II; and claims 15 and 16 were rejected under 35 U.S.C. §103(a), as being unpatentable over Rahman I as applied to claims 1-14, 17 and 18 above, and further in view of Sterner et al.

The Office Action has cited Lewis et al. for allegedly disclosing a product and process of making a dehydrated vegetable by dehydrating a vegetable piece to between 15 and 60% and compressing the vegetables. The Office Action was of the opinion that the claimed invention differs from Lewis et al. in the step of further dehydrating to a moisture content of 12% or lower and relied on the teachings of Rahman I and II for disclosing same. Consequently, the Office Action concluded that it would have been obvious to dehydrate to a

lower degree in the process of Lewis et al. using the further dehydrating steps of Rahman I and II.

The present invention, as now amended, is directed to a dehydrated shelf stable vegetable product which comprises a compressed vegetable piece having a moisture content of about 12% or less, and a substantially intact cellular structure, wherein the vegetable piece is compressed in one dimension to about 0.2 to 2.5 mm and when placed in water at a temperature of 90°C to 100°C without further application of heat is capable of rehydration substantially to its original fresh dimension and is of edible tenderness and texture instantly or within five minutes and wherein the vegetable is selected from a fleshy vegetable. Support for the amendment to the claims can be found on page 4 of the international publication, line 16.

Lewis et al. relates to a partially dehydrated vegetable and the problems of reducing the packing and storage cost while simultaneously improving the quality of vegetables stored at reduced temperatures. The vegetable products of Lewis et al. require cooking by boiling in water before consumption.

To the contrary, the present invention provides a dehydrated vegetable which is capable of “rehydration [instantly or within five minutes] to its original fresh dimensions and is of edible tenderness and texture” without the further application of heat after hot water is added.

Similarly, Rahman I requires boiling for 2 to 5 minutes. After boiling, the boiled vegetable is permitted to stand and simmer in hot water for 5 to 30 minutes (see Rahman I, column 5, lines 12-16). The examples of Rahman I have the vegetables being boiled for fifteen minutes followed by simmering for fifteen minutes in order to provide a re-hydrated product.

Consequently, it is respectfully submitted that an objective reading of Rahman I does not provide a skilled person with a quick cooking vegetable in accordance with the

present invention, alone or in combination with Lewis et al. It is further submitted that the skilled artisan reading the prior art would not result in the obtaining of the vegetable pieces of the dimensions as presently claimed and having the advantages thereof. Specifically, it is respectfully submitted that the recited compressed dimensions of “about 0.2 to 2.5 mm” of the vegetable pieces of the present invention assist in providing the rapid cooking products of the present invention. Again, the fact is that the products of the prior art processes have much longer cooking times than the products of the presently claimed process and products. Clearly, this suggests that the process and products of the present invention are different from those of the prior art of record.

Rahman II relates to a process for producing dehydrated uncooked cabbage which is stored in a hermetically sealed moisture proof container, which can be stored at 20°C or alternatively can be stored for at least 6 months at 40°C (see column 4, lines 30-33 of Rahman II). The Office Action alleged that Rahman II is being “used for what they teach as it is known to compact dehydrated vegetables.” Applicants disagree. Rahman II does not relate to a general teaching in relation to dehydrated vegetables. The Rahman II invention relates specifically to cabbage which has unique requirements. It particularly addresses the problem that:

"freezing of cabbage so severely damages the cellular structure of cabbage that, even though the cabbage may be freeze-vacuum-dehydrated to permit safe, prolonged storage the reconstituted cabbage product is very mushy even without being cooked"

(See column 1, lines 25-30 of Rahman II). Thus cabbage is not suitable for being frozen.

It is respectfully submitted that the problems encountered with frozen vegetables and dehydrated vegetables are very different and the two processes are alternatives to each other. Therefore, a teaching in respect of dehydration of a vegetable for storage at room temperature is not necessarily a teaching that can be applied to vegetables for freezing and

vice versa. That is, there is absolutely no motivation to the skilled azrtisan to combine the references of Lewis et al. and Rahman I because the processes are alternatives to one another. Specifically, Rahman I relates to the preparation of dehydrated food for army rations and the like whereas Lewis et al. relates to improvements in “frozen” vegetables. Furthermore, it is also clear that particular materials or vegetables have special requirements as exemplified above in relation to cabbage which is the subject of Rahman II. Accordingly, there is also no motivation to combine the teachings of Lewis et al. with those of Rahman II as Lewis et al. clearly relates to vegetables being stored at low temperature.

It is further noted that Rahman II, at column 3, lines 66-68 teach compression of the cabbage to “from about 3/8 inch about ½ inch thickness. Said range equates to 2.75 to 11 mm, well out of the range now included in the main claim.

Sterner *et al.* relates to instant beans prepared by dehydrating bean flakes, which have been precooked. The instant beans are suitable for use in Mexican restaurants and Mexican fast food chains. It addresses the problem relating to reproducibility in the quality of cooked beans, reduced cooking times for beans, storage and disposal of cans, which is inconvenient. It is an improvement over the prior art processes, which involve milling or rupturing the beans with rapid pressure changes. The invention that is described therein can be applied to:

"pinto beans garbonzo beans and peas as well as certain grains such as corn, wheat, rice, barely, triticales, oats, buck wheat".
Emphasis added

(See column 4, lines 55-62 of Sterner et al.)

Thus, the teachings of Sterner et al. is limited to hard grains or pulses. The Office Action however noted that “[t]his is not seen, as corn is included as claimed in the reference.” This line of reasoning raises a very important distinction between the present invention and that of Sterner et al. Sterner et al. relates to “corn grain” which is a hard grain (see column 4,

lines 57-61 of Sterner et al.) while the present invention relates to sweet corn, which is fleshy and requires preserving. It is respectfully submitted that "corn grain" cannot be considered to have the same or even similar properties to sweet corn. Accordingly, the previously submitted arguments distinguishing Sterner et al. from the present invention are reiterated here by reference thereto. Applicants specifically note that the compression step of Sterner et al.:

"insures that the internal cotyledon portion of the beans intricately fractures to a mealy structure ... which substantially decreases subsequent drying time".

(See column 9, lines 30-45 of Sterner et al.)

In contrast to the above, the cellular structure of the vegetables of the present invention remain substantially intact.

In summary, the claims of the presently amended application relate to processes applied to fleshy vegetables such as carrot, peas, pepper, tomato, sweet corn, onion, squash, chilli, zucchini, mushroom, cabbage, celery, green beans, beetroot and pumpkin. The teaching of Lewis et al. relates to frozen vegetable with a moisture content in the range of 15% to 60% and does not teach a dehydrated shelf stable vegetable according to the presently claimed invention. It is respectfully submitted that the words "dehydrated shelf stable vegetable" when read by a person skilled in the art imports the meaning of a vegetable storable at room temperature and not frozen and thereby limits the claim to the former. Whilst Lewis et al. does incorporate a compression step, this is to address a different problem, namely to reduce the storage space, which has significant cost benefits.

Any benefits in relation to the taste and texture of the frozen vegetable in Lewis et al. cannot be used to draw all inferences about dehydrated foods because of the significant differences in the storage condition. Any such made inferences based on Lewis et al. to obtain the teachings of the present invention amount to impermissible hindsight.

In contrast, the presently claimed invention addresses problems in relation to the taste and texture of dehydrated vegetables when reconstituted and also the time taken to reconstitute these vegetables. Admittedly, there are also cost benefits associated with the presently claimed invention as it avoids the necessity to freeze-dry vegetables, a process which has been proven to be both expensive and unsatisfactory, especially for use in instant: soups, pasta and noodle foods that simply require the addition of water, without further cooking.

The three step process in Rahman I of drying the vegetables, compressing the vegetables and subjecting the vegetables to further drying to provide vegetables that can be reconstituted with a desirable taste and texture is not compatible with the teaching of Lewis et al. directed to freezing vegetables which requires completely different considerations.

Furthermore, Rahman II teaches that freezing of cabbage is detrimental for the property of cabbage (see column 1, lines 25-34 of Rahman II) and thus is also inherently incompatible with the teaching of Lewis et al. Therefore, the teaching of Rahman II is limited to the preparation of dehydrated uncooked cabbage.

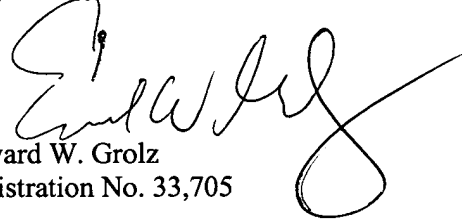
It is also respectfully submitted that the teaching of Sterner et al. is limited to pulses such as beans and hard grains such as rice, barley, etc. The present invention relates to fleshy vegetables which includes green beans, which are not pulses or hard grains, and also to peas, but only when fresh, not when dried and hard. The pulses and hard grains, which are the subject of Sterner et al. are never frozen even to this day and the skilled artisan would not consider the teaching of Sterner et al. and Lewis et al. to be compatible.

Based on the above facts, it is not seen how the Office Action can support its conclusion that “[o]ne can use the teaching of Lewis et al. for dehydrating and compressing and then instead of freezing the product, can dehydrate it as dehydrating is well known as disclosed by the Rahman references, Dehydration is another method of preserving as is freezing.” Each of the references being relied on by the Office Action concern different

products, different reaction conditions and different processes. The Office Action cannot simply choose bits and pieces from each to support its rejections. The teachings in their entireties must be taken into account. If this is done properly, it is respectfully submitted that none of the above-identified references, either individually or in combination, teach or suggest the presently claimed invention which provides dehydrated vegetables suitable for storage on the shelf, but is not under reduced temperature conditions, which can be prepared in a two-step process, which have desirable properties when reconstituted and which reconstitute rapidly.

The above amendments and remarks establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims, Claims 1-18, is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edward W. Grolz', with a large, stylized loop at the end.

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